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REMARKS

Restriction

Applicant confirms the election of claims 1-12 as reported in the Official Action. Claim 13 has been cancelled without prejudice to resubmission in a divisional application.

Specification Objection

The status of US application 09/034431, mentioned on page 2, is abandoned. However, a US patent has now issued from a continuation application claiming priority thereto through an intervening divisional application. The reference to the abandoned application has been replaced with a reference to US 6465067.

Additional Specification Amendment

The reference to the Levy patent on page 1 contains a typographical error. That error has now been corrected. The correct patent was provided in the first IDS filed in this case.

Claim Objections

Objection has been made to "ID" in claim 1. It has been changed to "internal diameter," as suggested by the Examiner. The same change has been made in claims 7-10 to conform to the antecedent in claim 1.

Objection has been made to claims 1 and 6 for the phrase "portion (A)." The references to this portion have been changed to "portion A" as suggested by the Examiner.

A similar objection to "(B1)" and "(B2)" in claims 7-10 has also been made. The suggested changes have been made in these claims.

Objection has been made to "up" in claim 5. The applicant agrees that the word "up" is extraneous and has deleted it as suggested.

Claim Rejections §112 - Indefiniteness

Claims 1, 8 and 10 have been rejected as indefinite for references to "the step (a)(i)" and "the step (a)(ii)," without antecedent. The claims have been amended to refer to "a step (a)(i)" and "a step (a)(ii)." These amendments are seen to remove the grounds for rejection.

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Claim Rejections §102 - Anticipation

Claims 1-4, 6-12¹ are rejected under 35 U.S.C. 102(b) as being anticipated by Jackowski et al. (U.S. Patent 5,017,325). The rejection is traversed. The applicant does not agree with the highlighted portions of the following statement, taken from the Office Action, which articulates the rationale of the rejection of claim 1.

Regarding Claim 1, Jackowski et al., hereafter "Jackowski," show that it is known to carry out a process for producing a balloon comprising (a) *axially stretching an extruded tubing segment made of a polymer material while pressurizing the tubing at an internal pressure above ambient pressure (Column 5, lines 25-27; Column 8, lines 32-37)*, to produce a stretched parison, the tubing segment having a first ID (Column 5, lines 44-46) and the polymer material having a glass transition temperature above ambient temperature (Column 13, lines 37-49), and then (b) blowing the balloon by expanding the stretched parison in a mold at a temperature above said glass transition temperature (Column 6, lines 3, 5-40; Column 9, lines 67-68 Column 10, lines 1 - 10), wherein said axially stretching comprises the step (a)(i) of subjecting the tubing to a temperature and internal pressure which is sufficient to expand the ID of at least a portion (A) of the stretched parison to a second ID greater than the first ID (Column 5, lines 54-62; Column 9, lines 67-68- Column 10, lines 1-10).

In particular, neither col. 5, lines 25-27, nor col. 8, lines 32-37 teach to stretch the extruded parison while pressurizing the tubing. Col. 8, lines 32-37, pertains to providing a pressurized fluid supply, "typically in conjunction with one or more regulators 44.... One or more valves 45 also assist in controlling the flow rate and volume of pressurized fluid within the parison 41." Clearly the valves will have to be open before any pressure is provided to the parison and nothing is said here indicating that the parison is connected with the valve(s) open. Further, in describing the use of the apparatus, Jackowski clearly teaches that pressurization of the parison is intermittent:

the gripping pads 67 will prevent movement of the parison 41 with respect to the gripping pads 67, but still permit the flow of pressurized fluid thereacross *when desired*.

(col. 8, lines 65-68, emphasis added)

Obviously at this point the tube is not yet pressurized. Following this statement Jackowski, in the same and the next paragraphs, describes the first axial stretch step and the first blow step:

¹ On page 4, claim 13 is also identified as being rejected for anticipation, and a statement of basis is found on page 7 of the Office Action. However, in view of the restriction of claim 13 and the failure to list claim 13 on paragraph 6 of the Office Action Summary, the inclusion of claim 13 in the recitation of this rejection is understood to be a clerical error. If claim 13 is considered to be rejected, applicant asserts that it is not anticipated, by Jackowski at least for the reasons that claim 1 is not anticipated.

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Gripper assembly 47 then moves in a downstream direction (to the right as illustrated in FIG. 3) *until the length of the parison that is secured between gripper assemblies 46 and 47 is stretched or longitudinally oriented to in excess of twice its length* up to as great as about four times its length or more, a typical stretching being approximately three times this unstretched length.

Next, the free-blow biaxial orientation chamber 55 is heated by passing heated thermal fluid into the fluid jacket 62. The chiller chambers 51, 52, or other suitable means, provide a thermal variant such that the heat from the fluid jacket 62 is imparted only to that length of the parison that is substantially within the free-blow biaxial orientation chamber 55. The temperature of this particular portion of the parison 41 will be heated above ambient temperature, for example to a temperature at least slightly above ambient such as between 30° C. and 60° C., preferably to a temperature of roughly between about 70° C. and 150° C. or more, depending upon the particular parison 41 and the balloon properties desired. *At this time, pressurized fluid* within in parison 41 that originates from the supply 43 *passes through the parison length at the gripper assembly 46 and into the parison length at the free-blow chamber 55*. If desired, the gripper assembly 48 can be utilized in order to confine this particular pressure application to the section of the parison 41 that is upstream thereof.

(Col. 8, line 65-col. 9. line 27)

Hence, the pressurized fluid isn't provided until after the extruded tube has already been axially stretched. Furthermore, when pressure is provided in the first blowing step, there is no indication that any further axial stretching occurs. Consequently, Jackowski does not anticipate claim 1. The rejection of claims 1-4 and 6-13 as anticipated by Jackowski should be withdrawn at least for this reason.

Further with respect to claims 7-11, the applicant does not agree that "Jackowski shows that it is known to carry out a process wherein the stretched parison comprises as second portion (B1) having an ID which is not greater than the first ID and in step (b) one of the waist portions of the balloon is formed from said portion (B1) (Figure 2c; Column 5, lines 44-46)," as asserted in the Office Action.

The combination of recitations of claims 1 and claim 7 identifies a parison which after axial stretching has at least two distinct portions, A and B1. Portion A forms at least the balloon body when the balloon is blown. Portion B1 forms one of the waist portions of the balloon. As a result of step (a)(i), portion A has an ID greater than the ID of the tube as extruded. Portion B, on the other hand does not have an ID greater than the ID of the tube as extruded. Jackowski does not have a parison of such configuration at any point in its process.

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Jackowski shows a process in which a portion of an extruded tube (Fig. 2a) is axially stretched at ambient temperature, to form a stretched portion (Fig 2b). The stretched portion is then free-blown in a first heated chamber which is then cooled to about room temperature. The entire free-blown balloon (Fig 2c) has been formed from the longitudinally stretched portion of the extruded tube, which had a reduced ID relative to the extruded tube. Therefore in forming the free-blown balloon of Fig 2c, there was no portion of the parison corresponding to portion A (having an increased internal diameter) recited in claim 1.

After it is formed, Jackowski's free-blown balloon is advanced to a molding chamber and the body portion of the free-blown balloon is concurrently stretched (Fig 2d). Again, the free-blown balloon is not pressurized during this axial stretching. See col. 9, lines 49-58. Consequently the free-blown balloon also does not correspond to portion A as recited in claim 1.

Further, even if the free-blown balloon was considered to be a portion A, there then would be nothing which could be assigned to part B1 as recited in claim 7. In the molding chamber the final balloon is blown from the stretched body portion of the free-blown balloon. The final balloon is the portion of Fig 2e between sever lines A and B (see col 10, lines 25-30. It is entirely derived from the portion of the parison which formed the body of the free-blown balloon of the first step. Neither of the waist portions of the balloon of Fig 2e were obtained from a stretched parison portion which had an internal diameter less than the internal diameter of the extruded tube.

At least for the additional reason that there are not least two distinct portions, A and B1, as recited in claim 7, the rejection of claims 7-11 should be withdrawn.

Still further, with respect to claim 8, because Jackowski fails to show formation of a parison part B1 as recited in claim 7, claim 8's method and timing for forming this portion, are also not found in Jackowski.

Further yet, with respect to claims 9 and 10, because Jackowski fails to show formation of a parison part B1 as recited in claim 7, the third portion B2 recited in claim 9 is also not found in Jackowski.

For the foregoing reasons the rejections of claims 1-4 and 6-12 should be withdrawn.

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Claim Rejections §103 - Obviousness

Claim 5 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Jackowski, in view of Hamlin (U.S. Patent 5,270,086). This rejection is also traversed.

The rejection relies on Jackowski in the same manner as applied to claim 1. Hamlin is relied upon only for the multilayer recitation found in claim 5. As shown above, Jackowski does not meet the recitations in claim 1 from which claim 5 depends. Moreover, Hamlin does not contain a teaching which would lead to a modification of Jackowski's process to bring it into accord with applicant's claim 1. Consequently this rejection should also be withdrawn.

Respectfully submitted,

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